Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-12 (Cancelled).

13(Currently amended). A method for gene therapy, comprising,

(1) contacting a solution containing a recombinant retrovirus with a functional substance that binds to the recombinant retrovirus ~~and being immobilized on a substrate~~ for 3 hours or longer, wherein the functional substance is immobilized on a substrate;

(2) washing the substrate to which the recombinant retrovirus is bound;

(3) contacting and incubating the substrate to which the recombinant retrovirus is bound with target cells collected from a donor; and

(4) transplanting the ~~cell~~ cells obtained ~~in~~ in step (3) into a recipient.

14(Currently amended). A method for gene therapy, comprising,

(1) contacting a solution containing a recombinant retrovirus with a functional substance that binds to the recombinant retrovirus ~~and being immobilized on a substrate~~;

(2) washing the substrate to which the recombinant retrovirus is bound;

(3) contacting and incubating the substrate to which the recombinant retrovirus is bound with target cells collected from a donor; and

(4) transplanting the ~~cell~~ cells obtained in step (3) into a recipient, wherein the frequency of contact between the recombinant retrovirus and the functional substance that binds to the recombinant retrovirus is physically increased in step (1).

15(Currently amended). The method according to claim 14, wherein step (1) is carried out by precipitating the recombinant retrovirus by centrifugal force onto the functional substance that binds to the recombinant retrovirus ~~and being immobilized on a substrate~~.

16(Currently amended). The method according to claim 14, wherein the functional substance that binds to the recombinant retrovirus has an activity of binding to the target cells.

17(Currently amended). The method according to claim 14, wherein another functional substance that binds to target cells is further immobilized on the substrate ~~the substrate on which the functional substance that binds to the retrovirus and another functional substance that binds to the target cells are immobilized is used~~.

18(Original). The method according to claim 17, wherein a vessel for cell culture or a particulate substrate is used as the substrate.

19(Currently amended). The method according to claim 14, wherein the solution containing the recombinant retrovirus is a culture supernatant of retrovirus producer cells obtained in the presence of a substance that enhances retrovirus production.

20(Currently amended). The method according to claim 19, wherein the solution containing the recombinant retrovirus is a culture supernatant obtained in the presence of sodium ~~butylate~~ butyrate.

21(Currently amended). A method for gene therapy, comprising,

(1) infecting target cells collected from a donor with a recombinant retrovirus in the presence of two functional substances;

a) a functional substance that binds to the recombinant retrovirus; and

b) an antibody which specifically binds to a CD antigen expressed on the target cells; and

(2) transplanting the cell obtained in step (1) into a recipient.

22(Currently amended). A method for gene therapy, comprising,

(1) infecting target cells collected from a donor with a recombinant retrovirus in the presence of two functional substances;

a) a functional substance that binds to the recombinant retrovirus; and

b) a sugar chain derived from laminin or a high mannose type sugar chain; and

(2) transplanting the cell obtained in step (1) into a recipient.

23(Currently amended). The method according to claim 22, wherein the functional substance that binds to the recombinant retrovirus has an activity of binding to the target cells.

24(Original). The method according to claim 22, wherein at least one functional substance is immobilized on a substrate.

25(Original). The method according to claim 24, wherein a vessel for cell culture or a particulate substrate is used as the substrate.

26(Original). The method according to claim 22, wherein the recipient is the donor itself.

27(Original). The method according to claim 22, wherein the target cells are hematopoietic stem cells.

28(Currently amended). The method according to claim 22, wherein the functional substance which binds to recombinant retrovirus is selected from the group consisting of fibronectin, fibroblast growth factor, collagen type V, polylysine and DEAE-dextran, as well as fragments thereof.

29(Currently amended). The method according to claim 13, wherein the functional substance that binds to the recombinant retrovirus has an activity of binding to the target cells.

30(Currently amended). The method according to claim 13, wherein another functional substance that binds to target

cells is further immobilized on the substrate~~the substrate on which the functional substance that binds to the retrovirus and another functional substance that binds to the target cells are immobilized is used~~.

31(Original). The method according to claim 30, wherein a vessel for cell culture or a particulate substrate is used as the substrate.

32(Currently amended). The method according to claim 13, wherein the solution containing the recombinant retrovirus is a culture supernatant of retrovirus producer cells obtained in the presence of a substance that enhances retrovirus production.

33(Currently amended). The method according to claim 32, wherein the solution containing the retrovirus is a culture supernatant obtained in the presence of sodium ~~butyllate~~ butyrate.

34(Currently amended). The method according to claim 21, wherein the functional substance that binds to the recombinant retrovirus has an activity of binding to the target cells.

35(Original). The method according to claim 21, wherein at least one functional substance is immobilized on a substrate.

36(Original). The method according to claim 35, wherein a vessel for cell culture or a particulate substrate is used as the substrate.

37(Original). The method according to claim 21, wherein the recipient is the donor itself.

38(Original). The method according to claim 21, wherein the target cells are hematopoietic stem cells.

39(Currently amended). The method according to claim 21, wherein the functional substance which binds to recombinant retrovirus is selected from the group consisting of fibronectin, fibroblast growth factor, collagen type V, polylysine and DEAE-dextran, as well as fragments thereof.

40(Original). The method according to claim 13, wherein the recipient is the donor itself.

41(Original). The method according to claim 13, wherein the target cells are hematopoietic stem cells.

42(Currently amended). The method according to claim 13, wherein the functional substance which binds to recombinant retrovirus is selected from the group consisting of fibronectin, fibroblast growth factor, collagen type V, polylysine and DEAE-dextran, as well as fragments thereof.

43(Original). The method according to claim 14, wherein the recipient is the donor itself.

44(Original). The method according to claim 14, wherein the target cells are hematopoietic stem cells.

45(Currently amended). The method according to claim 14, wherein the functional substance which binds to recombinant retrovirus is selected from the group consisting of fibronectin, fibroblast growth factor, collagen type V, polylysine and DEAE-dextran, as well as fragments thereof.